

REMARKS35 U.S.C. 103(a) Rejection of Claims

Claims 1-22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Olafsson (U.S. Pat. 6,163,570) in view of Goldstein (U.S. Pat. 5,265,151).

Applicants respectfully assert that the claims as presently pending are allowable over the prior art of record. Reconsideration is respectfully requested.

In the present office action, the Examiner uses Olafsson in the rejections of all of the claims under 35 U.S.C. 103(a). The arguments from Applicants' Appeal Brief dated March 28, 2002 are all still applicable to the current rejection. The arguments related to Olafsson from Applicants' Response dated 12/31/02 are all still applicable to the current rejection. The arguments related to Olafsson from Applicants' Response dated 6/5/03 are all still applicable to the current rejection.

The Examiner argues that Olafsson describes "comparing the transmit power level being less than or equal to the designated total transmit power limit" (Office Action dated 8/22/03, paragraph 2). Applicants respectfully point out that this step is not even in the claims. Instead, the claims expressly require use of a detected or measured transmit power level. Olafsson is NOT concerned with the actual transmit power levels at all. Olafsson does not detect, sense, or measure the actual transmit power. Rather, Olafsson tries to verify computational accuracy. Specifically, Olafsson teaches verifying a first remotely performed calculation against a second locally performed calculation. Thus the comparing taught in Olafsson is between two calculated values. Olafsson teaches a significantly inferior approach. Olafsson does not suggest the present invention, but in fact teaches away from the present invention by teaching a trial and error approach. As one example, note that unlike Olafsson, the present invention is useful even if both modems use the same, but somewhat inaccurate power calculation formula, since it measures or detects the actual transmit power and adjusts the transmit power accordingly. Olafsson is limited to calculated values, which has significant limitations over using actual detected or measured transmit power levels.

Goldstein describes a way to improve the performance of a modem by considering the effect of transmit power on intermodulation distortion (IMD). IMD is a channel impairment, a result of the channel being nonlinear. Under the premise that IMD gets worse at higher power

levels while other impairments do not, Goldstein aims to balance the impact of IMD against other impairments, like additive noise.

The Examiner asserts that "Goldstein discloses a method ... comprising steps of: detecting power level of the analog modem; and adjusting the transmit power level of the analog modem in accordance with the difference between the detected transmit power level and a desired transmit power level" and cites Goldstein col. 14, lines 24-50 (claim 27). Nowhere in claim 27, or anywhere else, does Goldstein teach or even suggest detecting, sensing, or measuring the transmit power level. What Goldstein does is "measuring ... data transmission error rate relating to said signals being transmitted ... and quality of points". Goldstein teaches measuring error rate, NOT transmit power level. Goldstein does NOT teach measuring transmit power level in any way.

The Examiner asserts that "Goldstein also discloses wherein the detecting and the adjusting are performed during design of a constellation" and cites Goldstein, col. 9, lines 46-62. There is nothing in these lines regarding constellation design; Goldstein merely refers to "quality of points in a constellation". Note that the "quality of points in a constellation" refers to the received signal quality. Goldstein does mention two possible measurements, namely "quality of points in a constellation", which is basically a way of saying SNR (if IMD is lumped into noise), and "error rate". The approach taught in Goldstein is to adjust the power without changing the constellation. This is contrary to the Examiner's assertion.

Thus, neither Olafsson nor Goldstein teach any of the steps of the independent claims.

Applicants respectfully assert that the dependent claims add further limitations to independent claims and are allowable for at least the same reasons as described herein.

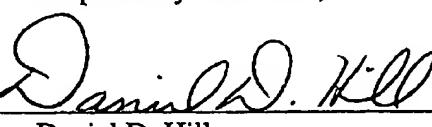
Applicant believes the application is in condition for allowance which action is respectfully solicited. Please contact me if there are any issues regarding this communication or the current Application.

Respectfully submitted,

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